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Permian nonmarine bivalve zonation of the East European platform

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Abstract

New finds and revision of available collections of nonmarine bivalves provided grounds for development of a zonal scale for terrestrial sequences of the Permian System based on species belonging to the genus Palaeomutela Amalitzky, 1891, which are characterized by regular changes in the structure of the shell hinge. The scale includes two parallel zonal successions that are based on the stratigraphic distribution and evolutionary trends of two morphological lineages of the genus. The zonal succession based on development of the P. umbonata group (dwellers of mobile waters and silty-psammitic substrates) includes 11 range zones: stegocephalum, ovatiformis, umbonata, quadriangularis, krotowi, wohrmani, numerosa, ulemensis, keyserlingi, curiosa, golubevi. The zonal succession based on development of the P. castor group (dwellers of calm waters and silty-pelitic substrates) includes eight range zones: larae, castor, olgae, doratioformis, marposadica, fischeri, obunca, amalitzkyi. The proposed zonal units are correlated with scales based on ostracod, fish, and tetrapod fossils. New species Palaeomutela golubevi sp. nov. and P. amalitzkyi sp. nov. are described with the extended diagnosis of the genus Palaeomutela.

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Keywords

East European Platform, nonmarine bivalves, Permian, zonal scale